



CoMET/DSMQ User Guide

Edit and Publish User Roles

Production Version 1.10.1

Table of Contents

Contact Information	1
Acknowledgements	1
Overview	1
New Users	2
Log In	2
CoMET Landing Page	4
CoMET Banner	4
CoMET Button	5
Log Out	5
Dark Mode	6
Records	6
Access Apps	7
User Guide	7
CoMET Footer	8
Metadata Records List Page	8
Streamline Page	9
Filters	9
Record Actions	10
New Record	11
Import	11
Upload an XML File	12
Upload Multiple/Bulk XML Files	15
URL To Remote XML File	17
Create a Record with ISO Editor	18
NCEI Template	19
Evaluate for Boilerplate	20
JSON Modification	20
Additional Fields	21
Blank Template	24
Create a Record with Simple Editor	25
Bulk Actions	28
Change Group	28
Download	30
Publishing	31
Request to Publish	31

Publish	33
Redraft	35
Unpublish	37
Metadata Records List	37
Edit	37
Data Management Plan	38
Data Stewardship Maturity Questionnaire (DSMQ)	38
ISO Editor	38
Extract and View Errors	40
Collaborative Editing	42
Simple Editor (Beta)	42
Docucomp Components	43
Manage	43
Copy	43
Revision History	46
Compare Versions	47
Undo a Change By Reverting To Prior Version	49
Delete Record	50
View	51
CoMET Format XML	52
Landing Page HTML	53
Plain Text HTML	54
Unresolved ISO 19115-2 XML	55
Assess	56
Component Analysis	56
CSW Rubric	57
DOI Rubric	58
ISO Rubric V2	59
OneStop Readiness	59
Validate	61
Validate ISO	61
Data Stewardship Maturity Questionnaire (DSMQ)	63
New Record	63
Create	63
Edit	67
Evaluate Questionnaire	68
API	69
Requirements	69
Basic CRUD Operations Supported by API:	69
Common URL Query Parameters	69

Log In	70
Create	71
Read/Export	72
Update	73
Delete	74
Search	75
Example Search Results	76
More Code Examples	76
Appendix	77
Glossary of Terms	77
Change Log	79

Contact Information

Questions or feedback regarding this guide should be directed to the OneStop Metadata Content Team (lori.hager@noaa.gov, catherine.luquire@noaa.gov, paul.lemieux@noaa.gov)

If you encounter issues or need to report a bug in CoMET, please email ncei.collection-manager.support@noaa.gov. Describe the issue or bug and steps required to replicate it. Additionally, provide your name and contact information if you wish to be contacted for issue clarification and/or to receive updates on the status of the issue.

Acknowledgements

Special thanks to Charlie Burris, Jerri Reeves, Marty Aubrey, and John Relph for their technical input

Overview

CoMET was created by the National Centers for Environmental Information (NCEI) to be NOAA's comprehensive and easy to use collection metadata creation and editing tool. It allows users to create ISO compliant metadata, can support NCEI collection metadata template, and is a gateway to publishing metadata to OneStop. CoMET includes a Data Stewardship Maturity Questionnaire (DSMQ) and Data Management Plan (DMP) functionality.

This guide was developed to assist users with learning how to use CoMET quickly and efficiently. Upon completing the guide, the user should be familiar with the base functionality of CoMET and be able to create and edit existing metadata, as well as to be able to perform a DSMM assessment with the use of the DSMQ form.

New Users

Note: If a NOAA employee, manager must request access

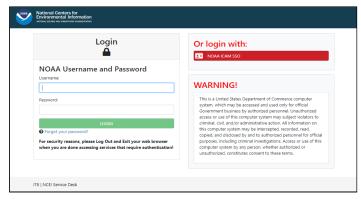
- Email: <u>ncei.collection-manager.support@noaa.gov</u>
- Subject:
 - New User for CoMET for employee name
- Body:
 - Employee's contact information
 - Associated program or agency
 - Records Group(s) to be accessed
 - If Record Group is unknown, user will be assigned to default Record Group 'CoMET Sandbox'
 - User may create/edit record here until appropriate Record Group is determined
 - Intended usage
 - o Include if ability to Publish records is required
 - New users will be assigned default user role EDIT

Log In

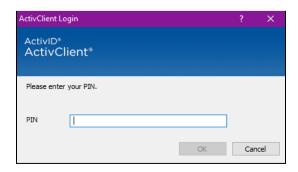
- Access CoMET at https://data.noaa.gov/cedit/
- Select 'Login'



- o If 'Request Account' is selected, email address for collection manager support is revealed
 - If account needed, follow instructions for New Users
- Enter Username (email address without @noaa.gov) and email password OR click 'NOAA ICAM SSO' button



- 'Select a certificate', if prompted
 - Select same certificate used when logging into work computer
- Enter CAC PIN



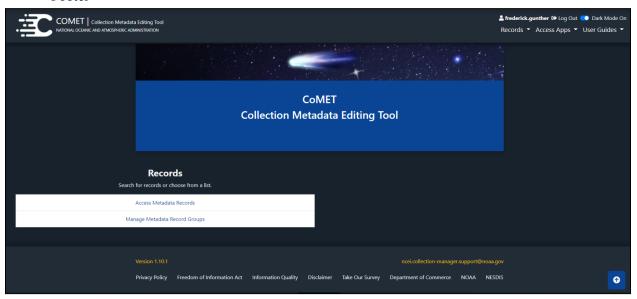
- After authentication, a Warning page is displayed
 - Click 'Accept' to proceed



• CoMET Landing Page loads

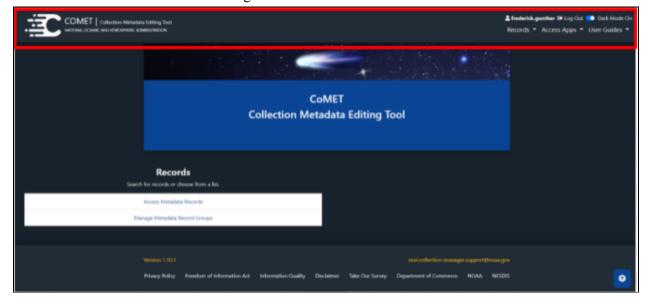
CoMET Landing Page

• CoMET Landing Page contains features that can be accessed in the Banner, "Records" Menu, and Footer



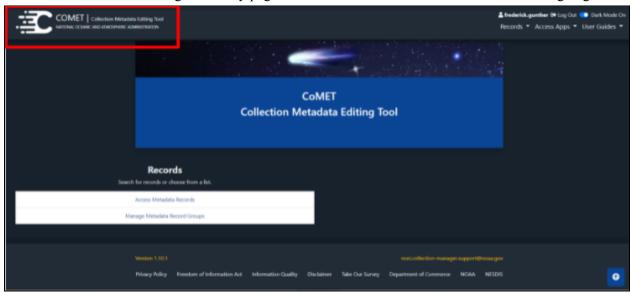
CoMET Banner

CoMET Banner is visible throughout the CoMET website



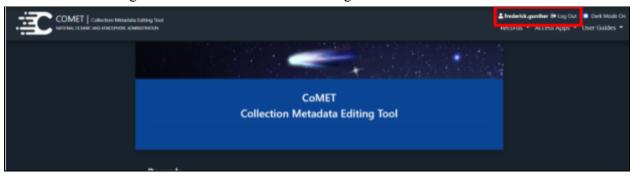
CoMET Button

• Click the CoMET Logo from any page within CoMET to return to the CoMET Landing Page

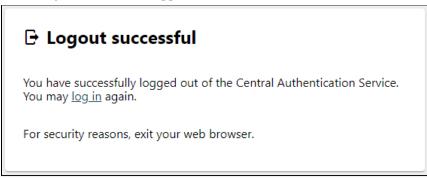


Log Out

• Click the "Log Out" button next to username to log out of CoMET

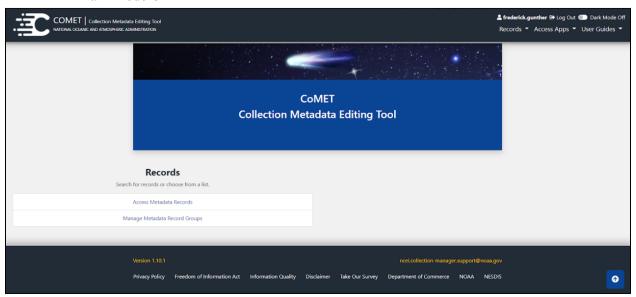


• Page reloads and "Logout Successful" appears

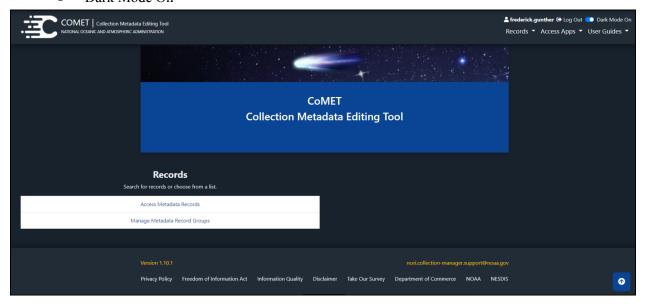


Dark Mode

- Toggle button for 'Dark Mode' at top right corner of banner
 - o 'Dark Mode Off'

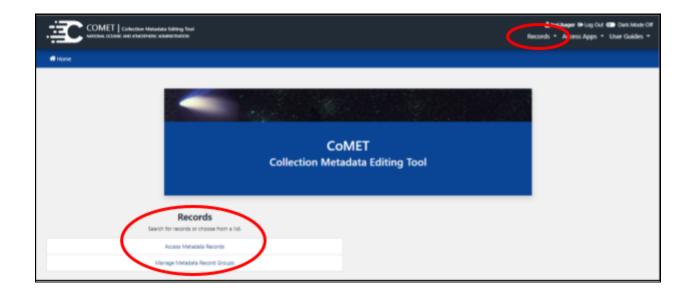


o 'Dark Mode On'



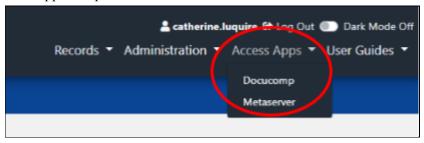
Records

- Click 'Access Metadata Records' from "Records" drop down menu in the banner OR button below "Records"
- "Metadata Records List" page loads



Access Apps

• Click "Access Apps" drop down menu from banner

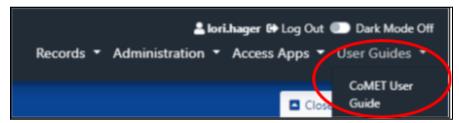


- Click Docucomp to navigate to Docucomp's website (https://data.noaa.gov/docucomp/)
- Click Metaserver to navigate to Metaserver's website (https://data.noaa.gov/metaserver/)

Note: "Administration" button only appears for Admin Users

User Guide

- Click 'User Guides' drop-down from banner
 - Select 'CoMET User Guide'



- NCEI's Metadata Resource site opens in new tab
 - o Below RESOURCES, click link CoMET User Guide

RESOURCES

CoMET User Guide

CoMET Footer

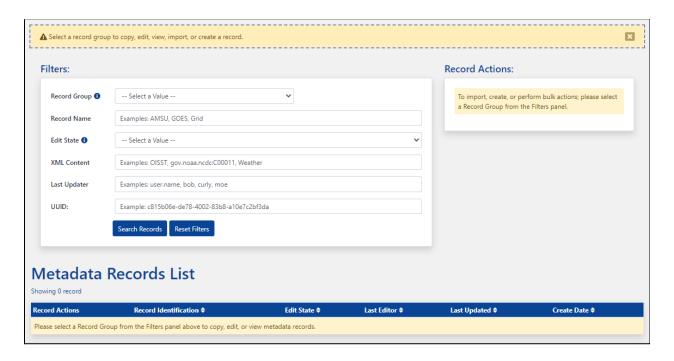
- CoMET footer is visible throughout the CoMET website
 - Website version is recorded
 - Website support email is linked
 - Associated resources and organizations are linked
 - Click Blue Up Arrow button to return to top of page



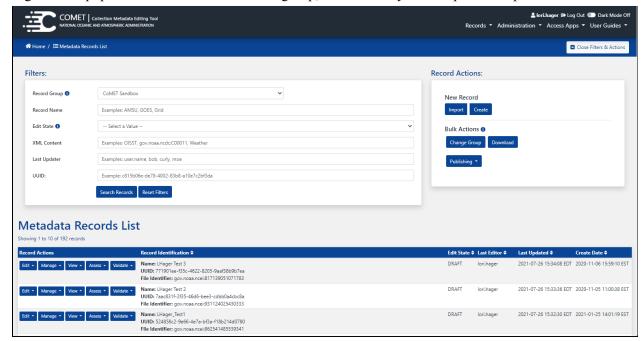
Metadata Records List Page

Metadata Records List page include Filters and Record Actions to apply to the Metadata Records list, and the Metadata Records List itself. *Note: A Record Group must be selected prior to performing any actions*

Select desired record group from 'Record Group' drop-down

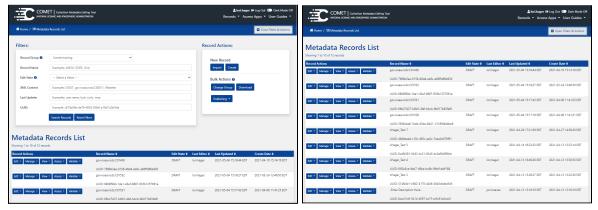


• Page is auto-populated with records from that group, as well as any actions permitted per user access tier



Streamline Page

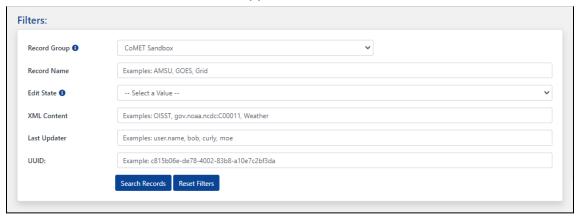
- Click 'Close Filters & Actions'
 - o Toggle between 'Close Filters & Actions' and 'Open Filters & Actions'



Filters

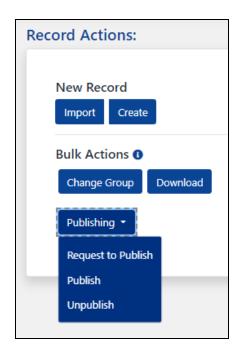
- Filters panel allows limiting number of records by various criteria
 - o Filter records by:
 - Record Name
 - Edit State
 - XML Content
 - Last Updater

- UUID
 - Automatically generated or use own from XML
- Click 'Search Records' to apply filter(s)
- Click 'Reset Filters' to clear filter(s)



Record Actions

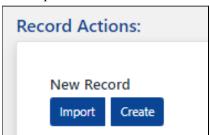
- Record Actions panel includes commonly-used actions
 - New Record
 - Import
 - Import one or multiple valid 19115-2 ISO XML files
 - Create
 - Create new records based on values in NCEI template
 - Bulk Actions
 - Change Group (action available only to PUBLISH user role)
 - Allows records to be moved from one group to another
 - <u>Download</u> (action available only to PUBLISH user role)
 - Allows download of multiple XML files
 - Publishing
 - Request to Publish
 - Request a draft to be published
 - Publish (action visible only to PUBLISH user role)
 - Unpublish (action visible only to PUBLISH user role)
 - o In development



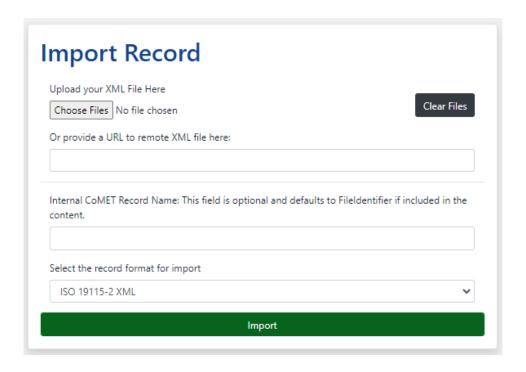
New Record

Import

• In Record Actions panel, click 'Import'

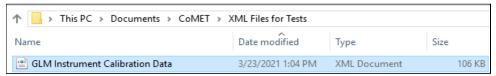


- 'Import Record' dialogue box opens
- Either click 'Choose Files' to upload XML file saved on computer OR enter URL for remote XML file
 - o All XML URLs must have XML extension
 - Multiple/Bulk files may be uploaded from computer
 - Multiple/Bulk URLs are not supported and must be imported individually

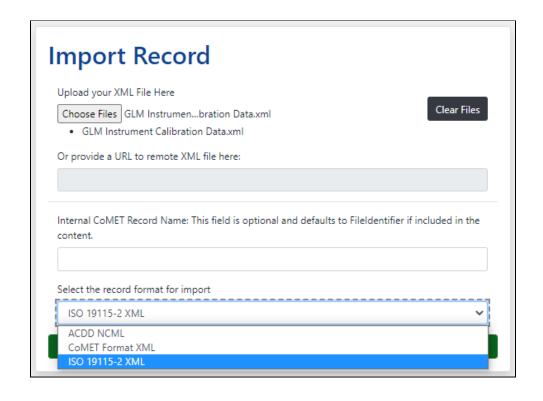


Upload an XML File

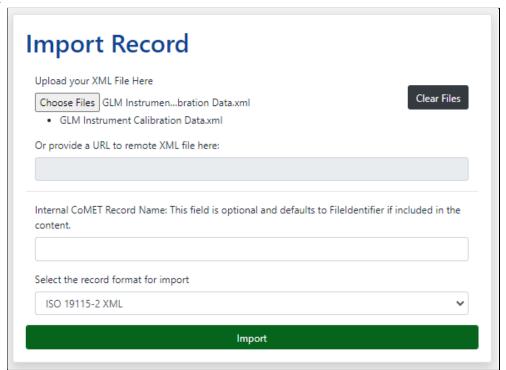
- Click 'Choose Files'
 - Select XML file from computer



- o Optional: CoMET Record Name
 - If record name is not entered, collection metadata ID from fileIdentifier will be used
- o Select Record Format from drop-down
 - ISO-19115-2-XML is default option



Click 'Import'



• Get message 'Metadata Record uploaded successfully!'

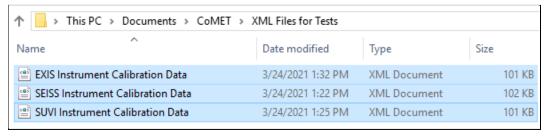


- If XML is not valid, receive error message
 - Check XML and try importing again

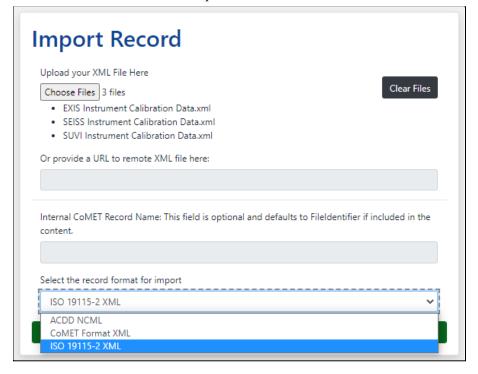


Upload Multiple/Bulk XML Files

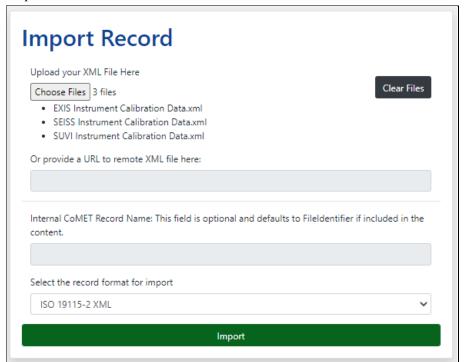
- Click 'Choose Files'
 - Select XML files from computer



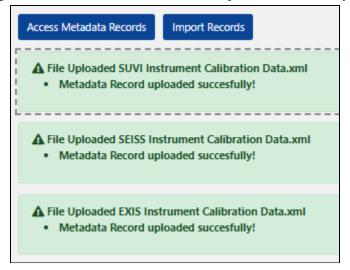
- Optional: CoMET Record Name
 - If record name is not entered, collection metadata ID (e.g. gov.noaa.ncdc:C01528) from fileIdentifier will be used
- Select Record Format from drop-down
 - ISO-19115-2-XML is default option



• Click 'Import'

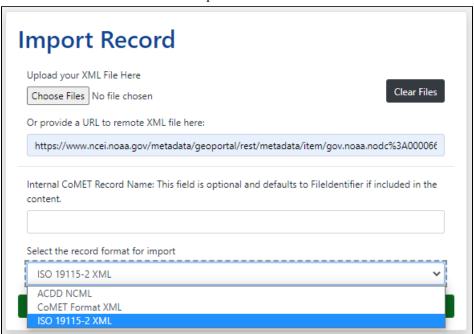


• Receive message for each record: 'Metadata Record uploaded successfully!'

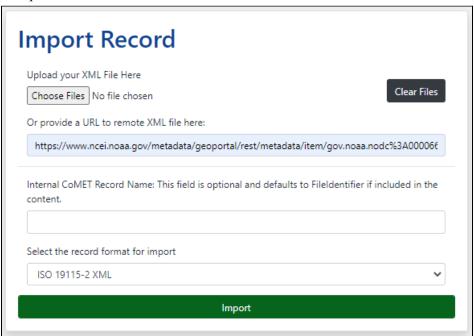


URL To Remote XML File

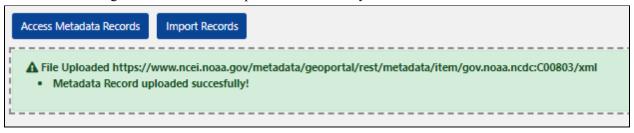
- Type or paste URL into 'Or provide a URL . . . ' field
 - Optional: CoMET Record Name
 - If record name is not entered, collection metadata ID (e.g. gov.noaa.ncdc:C01528) from fileIdentifier will be used
 - Select Record Format from drop-down
 - ISO-19115-2-XML is default option



• Click 'Import'

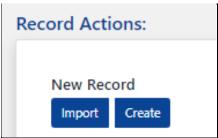


• Get message 'Metadata Record uploaded successfully!'



Create a Record with ISO Editor

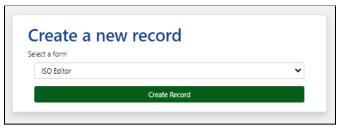
• In Record Actions panel, click 'Create'



• From 'Select a form' drop-down, select 'ISO Editor'



• Click 'Create Record'

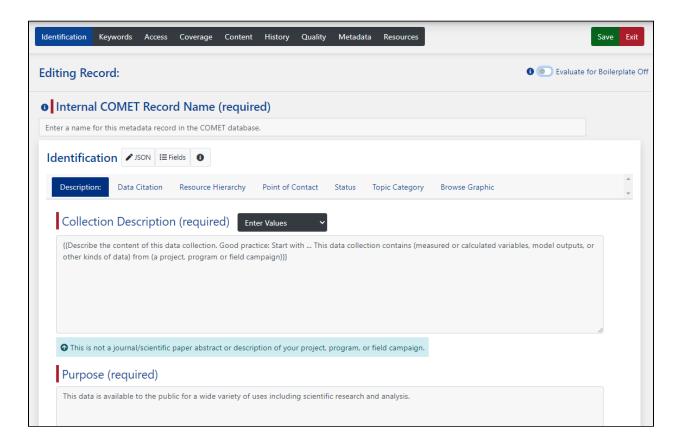


- At 'Would you like to use a template?' prompt
 - o Select 'No, use blank' to create blank XML record
 - OR select 'Yes, populate with the NCEI template' to create a record prepopulated with fields that are recommended by the NCEI Collection Metadata Template



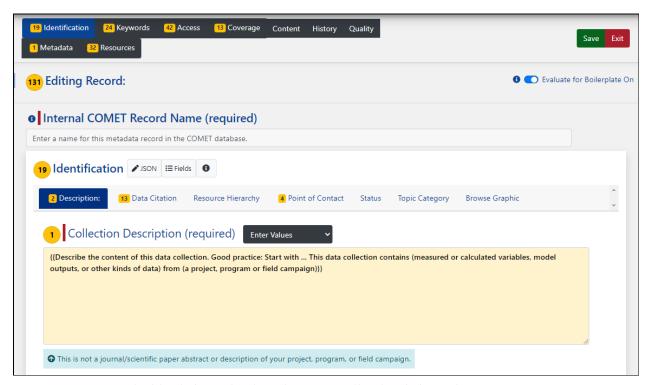
NCEI Template

- CoMET defaults to Identification Tab
- NCEI Template populates dummy metadata in several required fields, signified by curly brackets ({{}}), date fields with 9999, or numeric field values or 0 or 0.00
- Enter metadata into fields or replace template's dummy data
 - o ISO Editor's required fields are indicated by a vertical red bar next to field name, as well as text '(required)' after field name



Evaluate for Boilerplate

- Toggle "Evaluate for Boilerplate" button On to enable
- Boilerplate scans form for template's default dummy metadata
 - o Results are displayed in round orange badges throughout the form



• Hover over the blue information icon for more Boilerplate information



JSON Modification

Metadata can be directly modified or copied in JSON format

Click JSON button

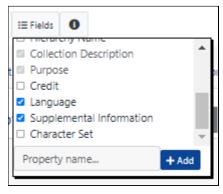


- o Modify, as desired
- o OR highlight text and click 'Copy'
- o If any changes made, click 'Save' in JSON window
- Click 'JSON' button again to close window

Additional Fields

Additional fields may be included by clicking 'Fields' button

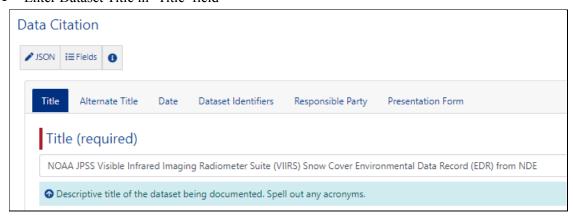
- Place checkmark in box next to desired field
 - o Gray boxes are required fields and already populated on the page
- Deleting a check removes field and its values



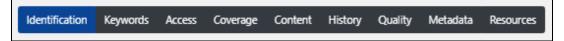
- After selecting fields, click 'Fields' button again to close window
- Click 'Data Citation' tab (next to 'Description' tab)



• Enter Dataset Title in 'Title' field

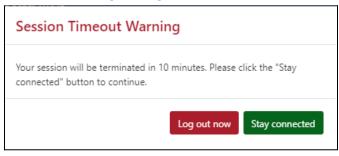


• Use tabs to navigate through form



• Save periodically as form will not save automatically

Note: If CoMET is left idle too long, session will time out and unsaved data will be lost User will receive Timeout Warning message

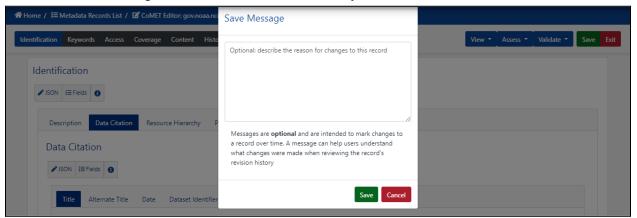


o Click 'Save' button at top right of page OR Save icon at bottom right of page





- Save Message appears
 - User has option to add reason for changes made to record
 - Comment is optional but strongly recommended. Comments allow users to easily understand changes between revisions.
 - Save Messages are included in Revision History

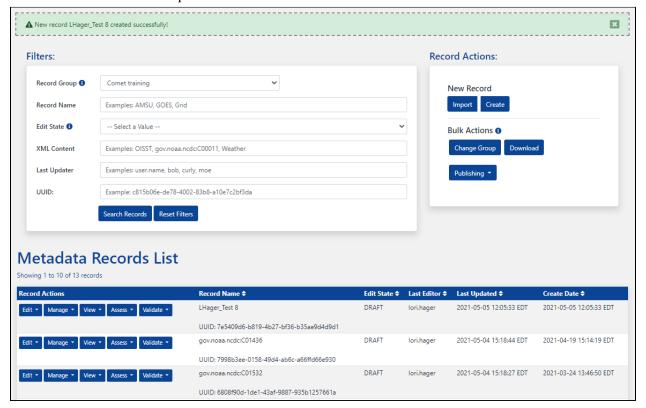


• Message appears 'New record . . . created successfully'



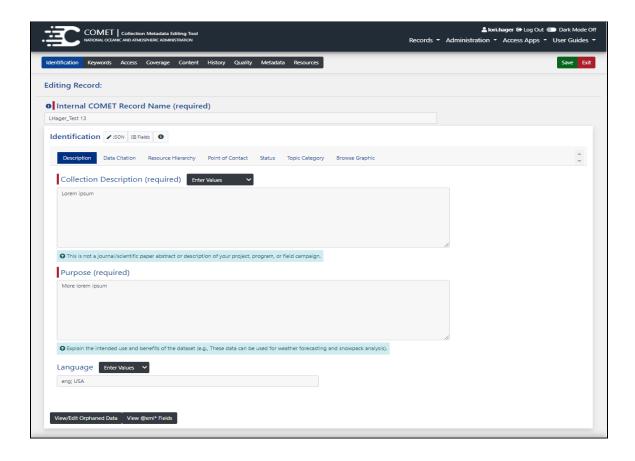
Note: Even if one or more required fields are blank or not in the expected format, CoMET will ignore the validation errors and allow the record to be created

- Metadata Records List page reloads
 - New record at top of Metadata Records List



Blank Template

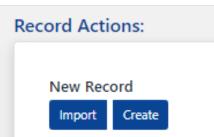
- CoMET defaults to Identification tab
 - o No fields are pre-populated



Create a Record with Simple Editor

Enables non-metadata experts to easily create metadata records within CoMET

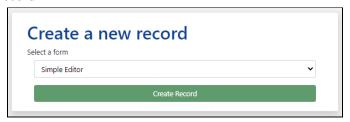
• In Record Actions panel, click 'Create'



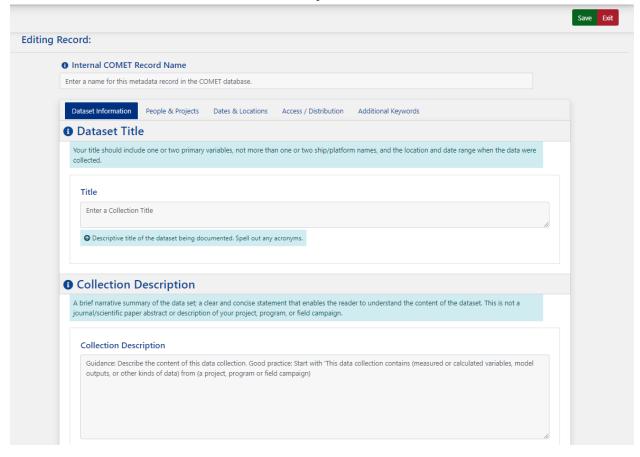
• From 'Select a form' drop-down, select 'ISO Editor'

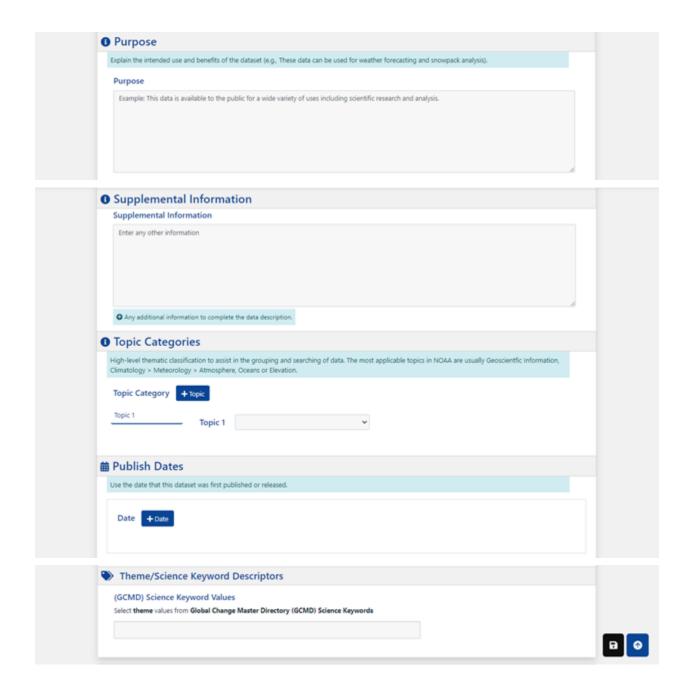


• Click 'Create Record'



- CoMET defaults to Dataset Information tab
 - o Enter data into fields
 - o 'Internal COMET Record Name' is a required field





• Use tabs to navigate through form



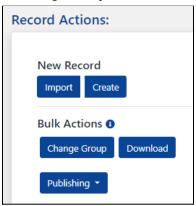
Bulk Actions

Change Group

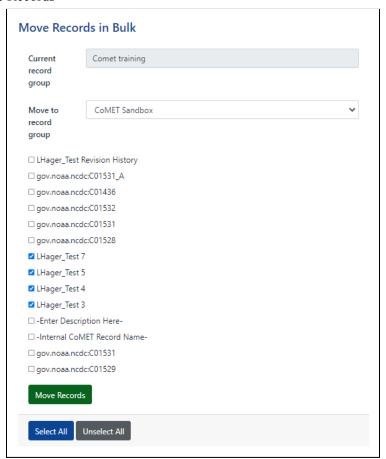
Note: Action available only to PUBLISH user role

Move record(s) from one Record Group to another

• In Record Actions panel, click 'Change Group'



- Select new Record Group from 'Move to record group' drop-down
- Check box(es) next to file(s) to be moved
- Click 'Move Records'



Message appears 'Records moved successfully!'



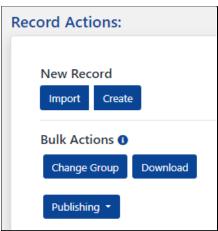
• Metadata Records List of target page reloads

Download

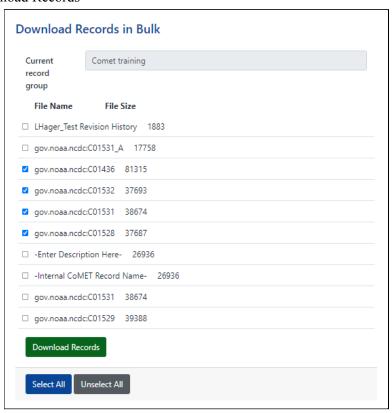
Note: Action available only to PUBLISH user role

Download one or more XML files to user records

• In Record Actions panel, click 'Download'



- From 'Download Records in Bulk' page, select record(s) to be downloaded
 - May Select All with button at bottom of page
- Click Download Records



- Open folder where records are to be saved
- Enter File Name
 - o Records saved in Zip file
 - o Click 'Save'

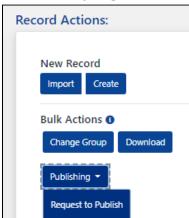


Publishing

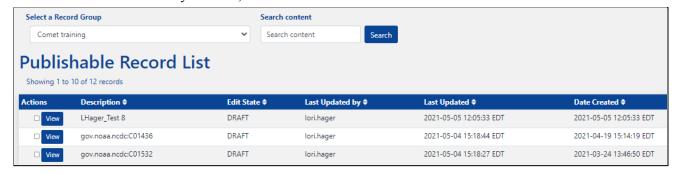
Request to Publish

Once record is complete, submit a request to have it published

• Select 'Request to Publish' from Publishing drop-down



- Publishable Record List is displayed
 - o Search records by Content, if desired

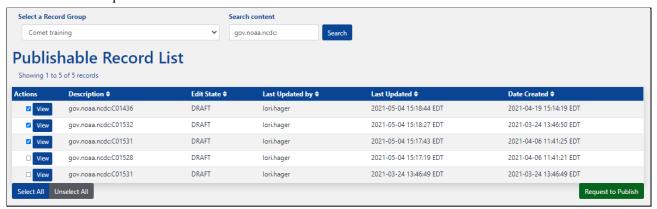


Note: To see all records to be published (if greater than 10 and fewer than 100), user must display number of records per page in an amount greater than number of records to be published

- o At bottom left of page, click on drop-down box to change number of records to be displayed
 - Default is 10



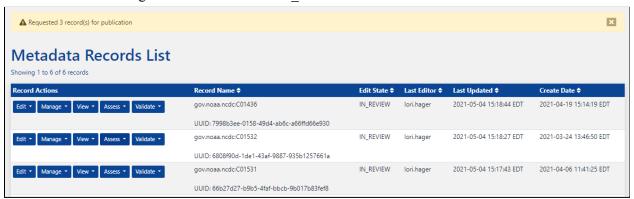
- Check box(es) next to record(s) to be published
- Click 'Request to Publish'



- Pop-up box requests 'Enter Reason for Change'
 - Comment is optional but strongly recommended
- Click 'OK'



- Message appears 'Requested . . . record(s) for publication'
- Metadata Records page reloads
- Edit State changed from 'DRAFT' to 'IN REVIEW'



• Record(s) pushed to Publisher who will review and submit for publishing

Note: User must notify Publisher of record(s) awaiting approval There are no automatic notifications from CoMET

Publish

Note: Action visible only to PUBLISH user role

Publish record(s)

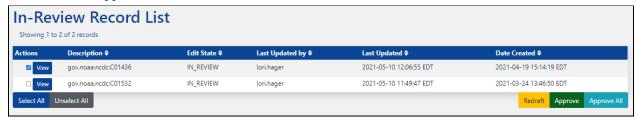
• Select 'Publish' from Publishing drop-down



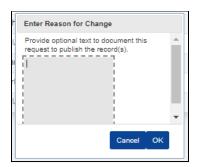
Only records with Edit State of 'IN REVIEW' will display



- Check box(es) next to record(s) to be published
- Click 'Approve'



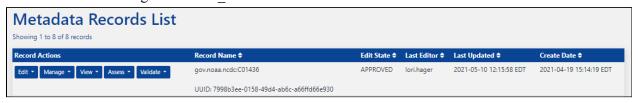
- Pop-up box requests 'Enter Reason for Change'
 - o Comment is optional but strongly recommended
- Click 'OK'



• Message appears 'Approved (#) record(s) for publication'



- Metadata Records page reloads
- Edit State changed from 'IN REVIEW' to 'APPROVED'



- After a few minutes page refreshes
 - o If ISO data is valid, Edit State changes from 'APPROVED' to 'PUBLISH'



o If ISO data is not valid, Edit State changes from 'APPROVED' to 'INVALID'



o Once data is corrected, record may be resubmitted for publishing

Redraft

Change Edit Status from 'IN_REVIEW' back to 'DRAFT'

• Select 'Publish' from Publishing drop-down



Only records with Edit State of 'IN REVIEW' will display



- Check box(es) next to record(s) to whose Edit Status is to be changed back to 'DRAFT'
- Click 'Redraft'



- Pop-up box requests 'Enter Reason for Change'
 - Comment is optional but strongly recommended
- Click 'OK'



• Message appears 'Rejected (#) record(s) for publication'



- Metadata Records page reloads
- Edit State changed from 'IN_REVIEW' back to 'DRAFT'

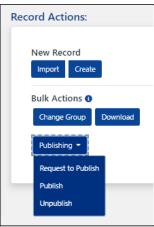


Note: Publisher must notify Editor that record was rejected for publication

Unpublish

Note: In development

Action visible only to PUBLISH user role



Metadata Records List

 Metadata Records List is a table that meets all filtered requirements and allows various actions to be performed on each record



- o Edit
 - Make changes to record data
- o Manage
 - Create copies of records, review a record's revision history, and delete records
- o <u>View</u>
 - Displays data in various formats
- Assess Assess
 - Confirms ISO and NOAA compliance
- o <u>Validate</u>
 - Validates data against ISO standard

Edit

Data Management Plan

• In development

Data Stewardship Maturity Questionnaire (DSMQ)

- DSMQ is an easy to use tool for assessing stewardship quality of digital environmental datasets
 - o Based on Data Stewardship Maturity Matrix (DSMM)
- If metadata record will be published in OneStop, completing a DSMQ allows user to take advantage of OneStop's unique relevancy ranking feature
 - It may help metadata appear higher in search results
- Future functionality will allow user to generate a Data Stewardship Maturity Report (DSMR) based on answers provided in DSMQ
 - Report may be published under DSMR Technical Information Series with NOAA Central Library's Institutional Repository (IR)
 - Reports submitted to IR receive a Digital Object Identifier (DOI) that can be used for citability and tracking purposes by author
- See **DSMQ** instructions

ISO Editor

Note: When Editing a record, if 'No, use blank' was selected when the record was initially created, and the user did not enter data into all of the Required fields, the user receives a 'Validation Failure' message and cannot Save the record again until the missing required data is entered.

If 'Yes, populate with the NCEI template' was selected when the record was initially created, the user does not receive a 'Validation Failure' message, at all. The user must still add the missing data but they are not reminded of that by the program.

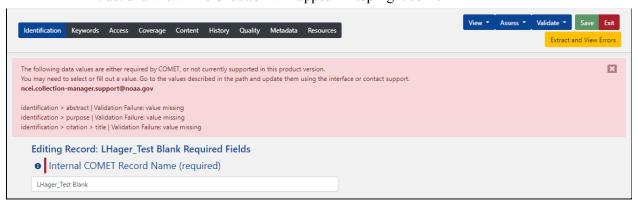
- On Metadata Records List panel, locate record to be edited and select 'Edit' drop-down from its row
 - Select 'ISO Editor'



- Record opens in new tab
- Edit metadata as desired
 - Insert <u>Docucomp components</u>, as needed

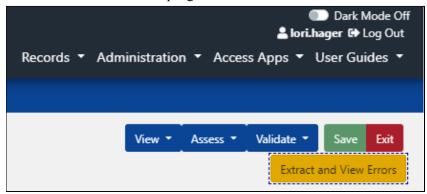
If 'No, use blank' was selected when record initially created, and data is missing from Description tab, 'Collection Description' or 'Purpose' OR data is missing from Data Citation tab, 'Title'

- Receive 'Validation Failure: value missing' message
- 'Extract and View Errors' button will appear in top right corner

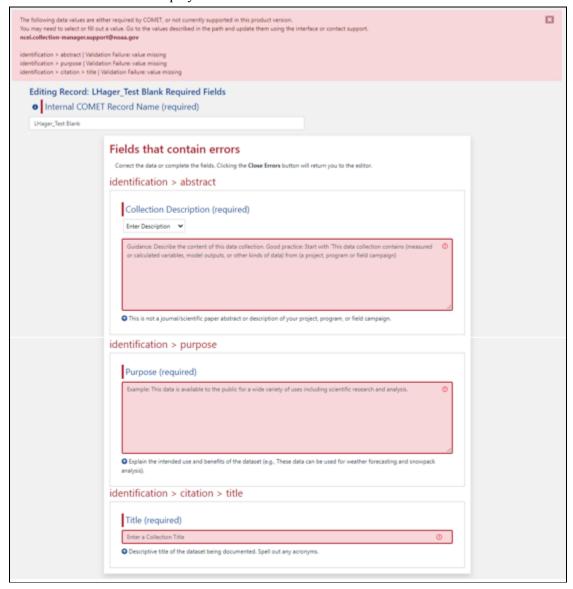


Extract and View Errors

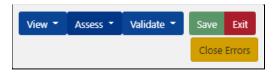
• Click 'Extract and View Errors' in top right corner



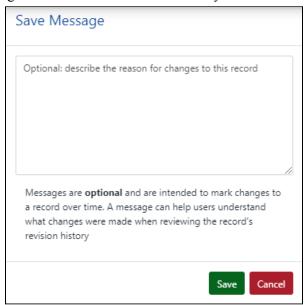
• Fields with errors are displayed



- Enter missing data
- Click 'Close Errors'



- Editing Record page reloads
 - Make further edits, as necessary
- Click 'Save'
 - o Save Message appears
 - User has option to add reason for changes made to record
 - Comment is optional but strongly recommended
 - Save Messages are included in Revision History



• Message appears 'Document updated successfully'

Document updated successfully!

- Editing Record page reloads
- If 'Yes, populate with the NCEI template' was selected when record initially created, and data is missing from Description tab, 'Collection Description' or 'Purpose' OR data is missing from Data Citation tab, 'Title'
 - Will not receive 'Validation Failure: value missing' message and 'Extract and View Errors' button will not appear

Note: No error messages or alerts are given if required data is not present in record User must confirm all data has been entered

Collaborative Editing

- Editors can edit only records within Record Groups to which they belong
- Records cannot be accessed by more than one editor at a time
- For 30 minutes after a record is saved, it becomes locked and cannot be accessed by another user
 - User who saved record may access it again without having to wait 30 minute time limit

Simple Editor (Beta)

- On Metadata Records List panel, locate record to be edited and select 'Edit' drop-down from its row
 - Select 'Simple Editor'

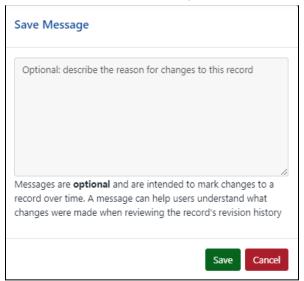


- Record opens in new tab
- Edit metadata as desired
- Click 'Save' button at top right of page OR Save icon at bottom right of page





- Save Message appears
 - User has option to add reason for changes made to record
 - Comment is optional but strongly recommended
 - o Save Messages are included in Revision History



Message appears 'Document updated successfully'

Document updated successfully!

• Editing Record page reloads

Docucomp Components

Docucomp manages reusable components (pieces of ISO XML) referenced by URLs within collection records, enabling many collections to use the same component, thereby increasing consistency and decreasing maintenance effort; also supports vocabulary services

Docucomp User Guide: Xlinks section

Manage

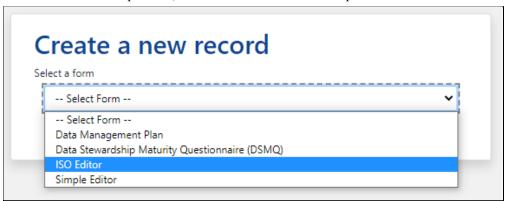
Copy

- If a new record is similar to an existing record, it may be more efficient to make a few changes to a copy
- Users can create templates for records with consistently similar information and copy them for each new record creation

- Can use record in any Edit State DRAFT, IN REVIEW, or PUBLISH
- Edit State for copy will be DRAFT, regardless of original's Edit State
- On Metadata Records List panel, locate record to be copied and select 'Manage' drop-down from its row
 - Select 'Copy'



- New tab opens
- From 'Select Form' drop-down, select 'ISO Editor' OR 'Simple Editor'



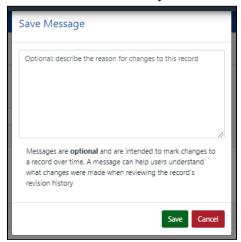
• Click 'Create Record'



- Identical record created
- Editing page for copy opens
- If form is to have a different title, change it in 'Internal COMET Record Name' field
- Once changes to record are complete, click 'Save'



- Save Message appears
 - User has option to add reason for changes made to record
 - Comment is optional but strongly recommended
 - Save Messages are included in Revision History



- Message appears 'New record . . . created successfully!'
- Metadata Records List page reloads



Revision History

- On Metadata Records List panel, locate record and select 'Manage' drop-down from its row
 - Select 'Revision History'

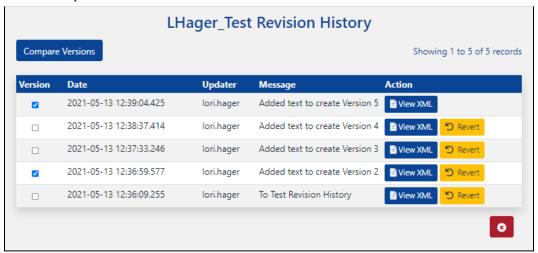


- Each time a record is saved, Date and Updater are noted
 - o If a Message was saved, it is also displayed

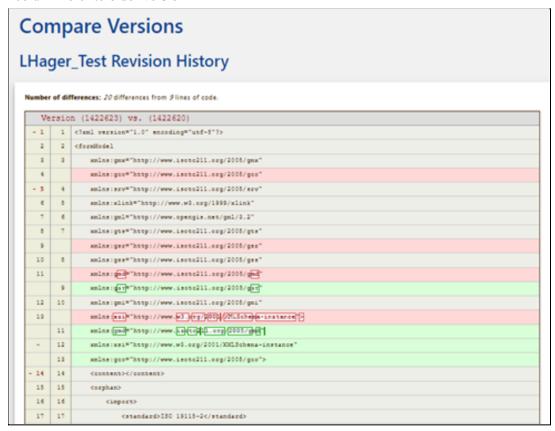


Compare Versions

- Check Version boxes of records to be compared
 - Clicking red 'X' in bottom right corner will deselect Version box
- Click 'Compare Versions'



 Below 'Version', numbers in left column refer to more recent version and numbers in right column refer to older version



- XML may be viewed from Revision History page
 - o Below Action, click 'View XML'



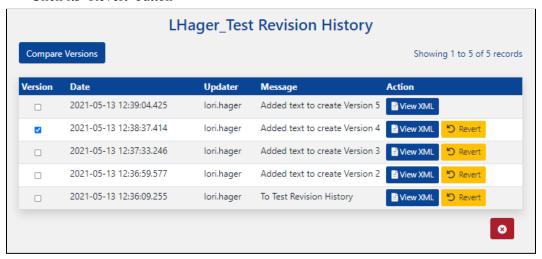
- XML for selected record appears
 - Click Back arrow button to return to Revision History page

```
This XML file does not appear to have any style information associated with it. The document tree is shown below.

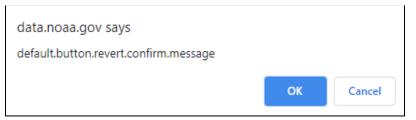
V <formModel xmlns:gmx="http://www.isotc211.org/2005/gmx" xmlns:srv="http://www.isotc211.org/2005/srv" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns:gmi="http://www.isotc211.org/2005/gmi" xmlns:gml="http://www.opengis.net/gml/3.2" xmlns:ggts="http://www.isotc211.org/2005/gts" xmlns:ggs="http://www.isotc211.org/2005/gts" xmlns:ggs="http://www.isotc211.org/2005/gts" xmlns:ggs="http://www.isotc211.org/2005/gts" xmlns:ggd="http://www.isotc211.org/2005/gts" xmlns:ggt="http://www.isotc211.org/2005/gts" xmlns:ggt="http://www.isotc211.
```

Undo a Change By Reverting To Prior Version

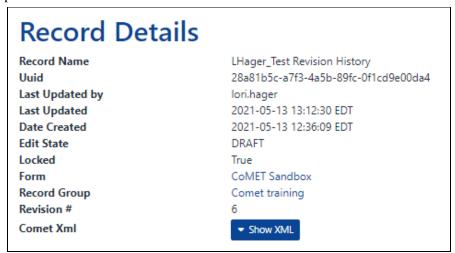
- Recall an earlier version and make it current version
 - o On Revision History page check appropriate Version box
 - Clicking red 'X' in bottom right corner will deselect Version box
 - o Click its 'Revert' button



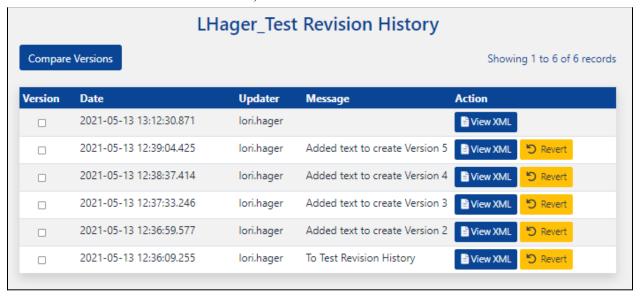
Click 'OK'



• Page opens with Record Details



- Revision # is 6
 - Record had 5 versions
 - Version numbers were 1 through 5, with 5 being most recent (counting from bottom up)
 - Version 4 was recalled
 - Copy of version 4 became version 6
 - Next time record is edited, version 6 will be used



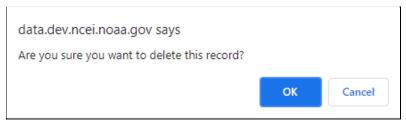
Delete Record

- On Metadata Records List panel, locate record to be deleted and select 'Manage' drop-down from its row
 - o Select 'Delete Record'

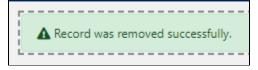
Note: Delete Record is not an option for records with Edit State of 'Publish' Published records cannot be deleted



- Confirmation message appears
 - Click 'OK'



Message appears 'Record was removed successfully'



• Metadata Records List page reloads

View

Contents of record may be viewed in various ways

• On Metadata Records List panel, locate record to be viewed and select 'View' drop-down from its row



New tab opens

CoMET Format XML

Internal format-neutral representation of descriptive information about the collection, includes related DMP and DSMQ information

Example:

```
This XXML file does not appear to have any style information associated with a The document tree is shown below.

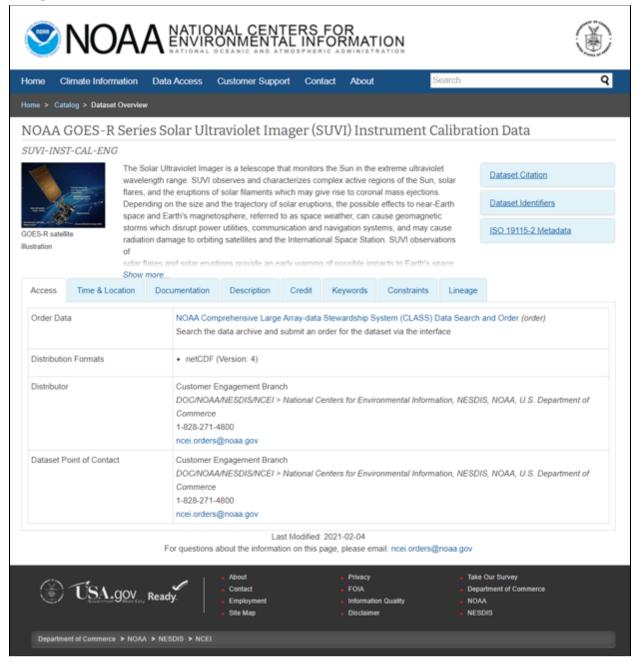
**oformical substages**Pitty://www.isotclli.org/2000/gcs** selections** interprises** interprises*
```

Landing Page HTML

HTML rendering of unresolved metadata content and how it will look on NCEI's Geoportal

• Xlinks are not resolved in this view

Example:



Plain Text HTML

Plain text rendering of unresolved metadata content, which may include elements not presented on Landing Page HTML

Example:

```
referenceSystemInfo
identificationInfo
 contentInfo
 distributionInfo
 dataQualityInfo
 dataQualityInfo
 dataQualityInfo
 metadataMaintenance
  NOAA JPSS Visible Infrared Imaging Radiometer Suite (VIIRS) Snow Cover Environmental Data Record (EDR) from NDE
    fileIdentifier: gov.noaa.ncdc:C01436
language: eng; USA
characterSet: (MD_CharacterSetCode) utf8
    hierarchyLevel: (MD_ScopeCode) dataset
       organisationName: DOC/NOAA/NESDIS/NCEI > National Centers for Environmental Information, NESDIS, NOAA, U.S. Department of Commerce
       positionName: ISO 19115 Metadata Contact
       contactInfo: (CI Contact)
         phone: (Cl
            voice: 1-828-271-4800
facsimile: 1-828-271-4876
            deliveryPoint: 151 Patton Avenue
deliveryPoint: Veach-Baley Federal Building, Room 468
             city: Asheville
             administrativeArea: NC
            postalCode: 28801-5001
             country: USA
             electronicMailAddress: ncei.orders@noaa.gov
          onlineResource: (CI_OnlineResource)
            linkage: https://www.ncei.noaa.gov
            protocol: HTTPS
             applicationProfile: Web Browser
             name: NOAA National Centers for Environmental Information (NCEI)
            description: NCEI home page with information, data access and contact information function: (CI_OnLineFunctionCode) information
         hoursOfService: 8:00 - 6:00 Eastern
    role: (CI_RoleCode) pointOfContact
dateStamp: 2019-05-29
    metadata Standard Name: ISO 19115-2 Geographic Information - Metadata - Part 2: Extensions for Imagery and Gridded Data metadata Standard Version: ISO 19115-2:2009(E)
    referenceSystemInfo: (MD ReferenceSystem)
       referenceSystemIdentifier: (RS_Identifier)
          authority: (CI Citation)
             title: EPSG Geodetic Parameter Dataset Registry
             date: (CI_Date)
date: 2008-11-12
             dateType: (CI_DateTypeCode) publication
citedResponsibleParty: (CI_ResponsibleParty)
organisationName: International Association of Oil and Gas Producers (OGP) Geomatics Committee
                  onlineResource: (CI_OnlineResource)
                    linkage: http://www.epsg-registry.org/
                    applicationProfile: Data Search Application
                    name: EPSG Geodetic Parameter Dataset Registry Application
```

Unresolved ISO 19115-2 XML

Representation of unresolved ISO 19115-2 metadata content represented in ISO 19139-2, which is XML implementation of ISO 19115-2 content standard

Example:

```
This XXML file does not appear to have any style information associated with it. The document tree is shown below:

**vgsiii_Stratute** unlocates** "http://www.isotill.org/2009/gpd** unlocates** unlocates** "http://www.isotill.org/2009/gpd** unlocates** unlocates** "http://www.isotill.org/2009/gpd** unlocates** unlocates**
```

Assess

Contents of record may be assessed against various rubrics

 On Metadata Records List panel, locate record to be assessed and select 'Assess' drop-down from its row

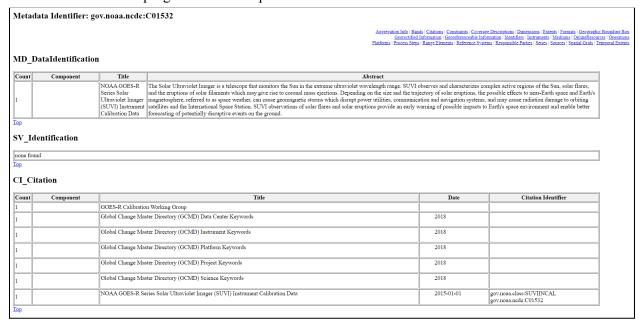


• New tab opens

Component Analysis

Shows information based on ISO XML tag

• Click link in top right corner to skip to its data



CSW Rubric

Identifies ISO metadata elements that support the Open Geospatial Consortium Catalog Services for the Web (CSW) Specification

ISO 19115 Catalog Services for the Web Report

This report identifies ISO metadata elements that support the Open Geospatial Consortium Catalog Services for the Web (CSW) Specification. The elements are listed in three groups: Core Queryables, Core Returnables, and Additional Queryables. The Rubric at the top of the report summarizes the results. Each spiral is represented by a row in the rubric. The columns show the % of the elements in that spiral that exist in the record. Click the spiral name for more details. This report is produced using this <u>stylesheet</u>. Please contact <u>Ted Habermann</u> if you have questions or suggestions.

Title: NOAA GOES-R Series Extreme Ultraviolet and X-ray Irradiance Sensors (EXIS) Instrument Calibration Data

Total Spiral Score: 29/36

Spiral	None	1-33%	34-66%	67-99%	All
Core Queryables					
Core Returnables					
Additional Queryables					

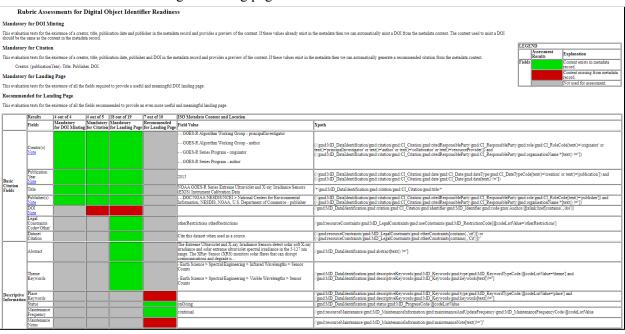
Core Queryables Score: 10/12

The Open Geospatial Consortium Catalog Services for the Web (CSW) standard defines 12 "Core Queryables" that must be supported in any compliant implementation. Profiles of CSW map these queryables to concepts and xPaths for particular metadata dialects.

Score		Description	Path
	(Count)		
	Subject	Keywords, usually from a shared	/*/gmd:identificationInfo/*/gmd:descriptiveKeywords/gmd:MD_Keywords[gmd:type="theme"]/gmd:keyword/gco:CharacterString
1		vocabulary, that describe the topic or theme of the resource. More	
	Subject	A citation to the source for the subj	
	Thesaurus	ect (theme) keywords. This field is not included in the CSW Specifica	
1		tion but it is important when keyw	
		ords from a shared vocabulary are	
		used.	
	Title	A short description of the resource.	/*/gmd.identificationInfo/*/gmd.citation/gmd:CI_Citation/gmd:title/gco:CharacterString
		The title should be descriptive	
1		enough so that when a user is	
		presented with a list of titles the general content of the data set can	
		be determined. More	
	Abstract	A summary of the content of the	/*/gmd:identificationInfo:*/gmd:abstract/gco:CharacterString
1		resource.	
1	AnyText	A target for full-text search of	Many text paths
1		character data types in a catalogue.	

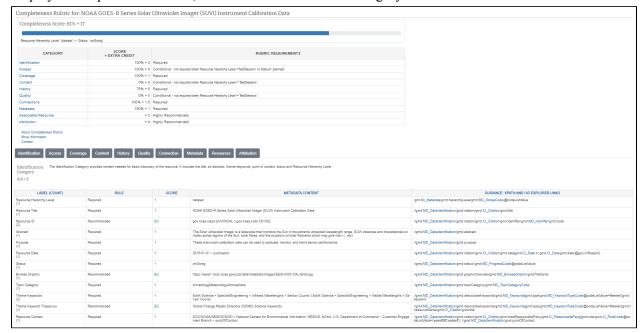
DOI Rubric

- Mandatory for DOI Minting
 - This evaluation tests for the existence of a creator, title, publication date, and publisher in the metadata record and provides a preview of the content
- Mandatory for Citation
 - This evaluation tests for the existence of a creator, title, publication date, publisher and DOI in the metadata record and provides a preview of the content
- Mandatory for Landing Page
 - This evaluation tests for the existence of all the fields required to provide a useful and meaningful DOI landing page
- Recommended for Landing Page
 - This evaluation tests for the existence of all the fields recommended to provide an even more useful and meaningful landing page



ISO Rubric V2

Tool to confirm if a record adheres to NOAA metadata best practices Displays 'Completeness Score', as well as scores for each category



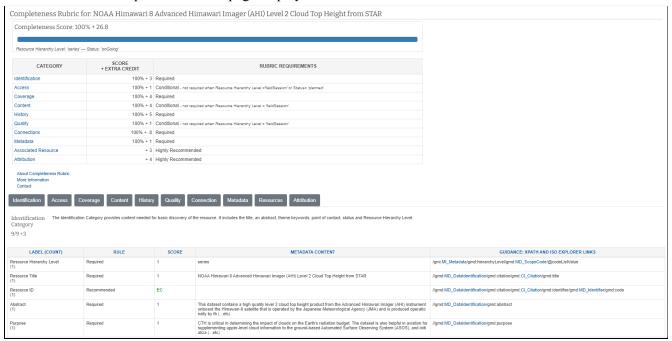
OneStop Readiness

User Guide for Data Managers: OneStop Data and Metadata Improvement Tier Guidance v2.1

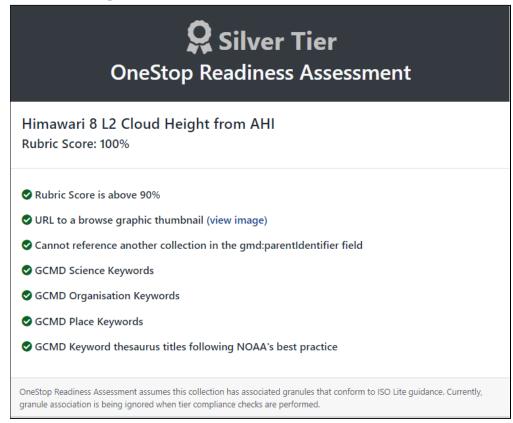
- If 'Rubric V2' has not already been run for record, message appears 'You need to run the rubric assessment for this record, please do that and refresh this page.'
 - o Click 'Run Rubric V2' button in message



• Record's Completeness Score page displays



- Close Completeness Score tab and on Metadata Records List panel, locate same record and select 'Assess' drop-down from its row
 - Select 'OneStop Readiness' to view assessment



Validate

Validate ISO

A metadata record can be validated using the XML Schema Definition (XSD)

- On Metadata Records List panel, locate record to be validated and select 'Validate' drop-down
 - Select 'Validate ISO'



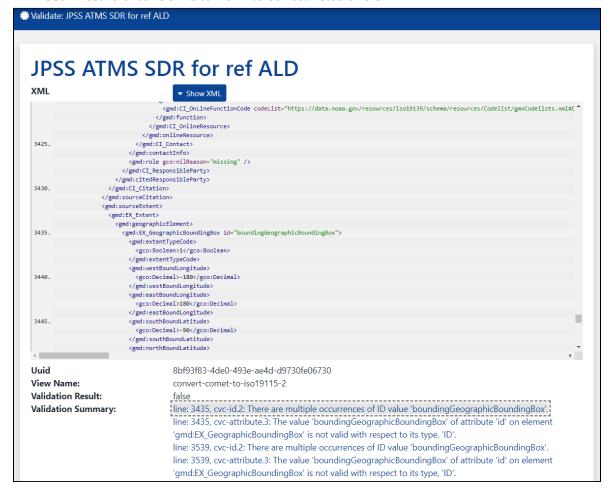
- When validation run finishes, 'Validate ISO' page opens in new tab
 - If record is compliant with ISO XSD schema (no issue is found) 'Validation Result:' field displays 'true'



- If record is not compliant with ISO, error messages are shown with line numbers
 - o Error message lines are links



- At 'XML', click 'Show XML' to view all XML code
- At 'Validation Summary', click line link to view XML code for error
 - XML code appears above text
- User must refer to ISO Editor form to correct listed errors



Data Stewardship Maturity Questionnaire (DSMQ)

New Record

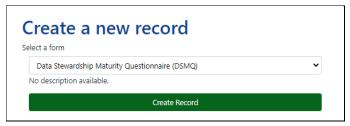
New DSMQ records are created one at a time using 'Create' button

Create

- In Record Actions panel, click 'Create'
- From 'Select a From' dropdown, select "Data Stewardship Maturity Questionnaire (DSMQ)"



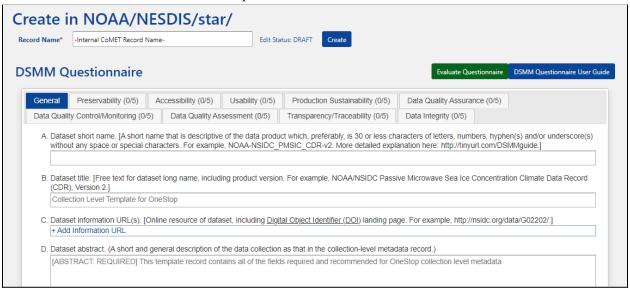
Click 'Create Record'



• CoMET/DSMQ defaults to General tab

Note: User may select blue 'Create' button at top center of page or bottom center of page at any point after entering a 'Record Name'

• All fields in all tabs must be completed



- At C., click 'Add Information URL'
 - o Enter URL in field
 - Click red trashcan to delete URL

C. Dataset information URL(s). [Online resource of dataset, including <u>Digital Object Identifier (DOI)</u> landing page. For example, http://nsidc.org/data/G02202/.]

+ Add Information URL

• Click 'Next' at bottom of page to move to next tab



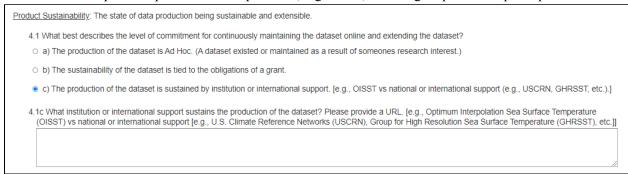
OR go back to top of page and select desired tab



Tooltips with additional information will appear when user hovers cursor over underlined text



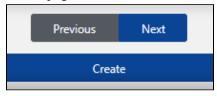
• Some responses open additional questions, e.g. at 4.1, selecting response 'c'opens question 4.1c



• To save initial data, click 'Create' at top of page

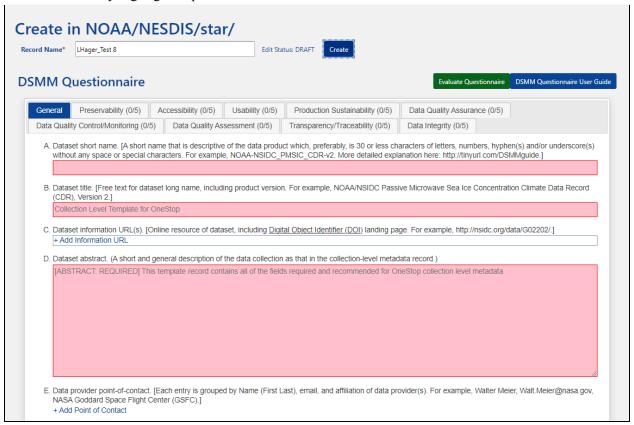


Or click 'Create' at bottom of page

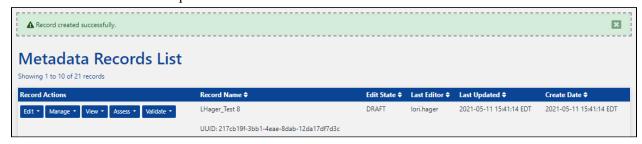


User may go back later to edit record

• If data is missing from 'Dataset Short Name', 'Dataset Title' or 'Dataset Abstract' fields, fields will briefly highlight as pink



- Message appears 'Record created successfully'
- Metadata Records List page reloads
 - New record at top of Metadata Records List



Edit

- On Metadata Records List panel, locate record to be edited and select 'Edit' drop-down from its row
 - Select 'Data Stewardship Maturity Questionnaire (DSMQ)'



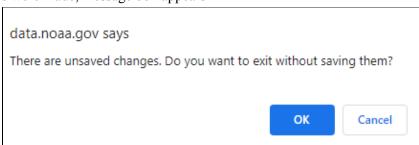
- Record opens in new tab
- Edit Metadata as desired
- Click 'Save' at top right of page or bottom of page



- Message appears 'Record updated'
- Editing Record Page Reloads



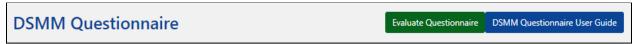
- If 'Exit' was selected and no changes made to record, page reloads to Metadata Records List
- If changes were made, message box appears



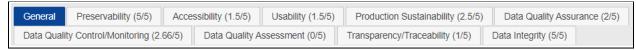
- To exit without saving changes, click OK
- To save changes, click Cancel, then Save

Evaluate Questionnaire

- User may utilize 'Evaluate Questionnaire' functionality at any point in Editing process to receive a maturity score for each section of questionnaire
 - o Click 'Evaluate Questionnaire'



- Each tab displays its Evaluation score
 - All questions in a tab must be answered to produce a score



• If record originally created in ISO Editor Record Name, Dataset Title and Dataset Abstract are automatically entered in DSMQ record

API

CoMET API gives users the ability to write programs (scripts) to create/import, export, update, and delete single or multiple ISO records in a Record Group. All examples in this user guide are currently written in Bash.

Requirements

- Users must have a @noaa.gov email account with CoMET
- User must be assigned to recordGroup they are trying to interact with programmatically
- To be added to a recordGroup, email ncei.collection-manager.support@noaa.gov

Basic CRUD Operations Supported by API:

- Create
 - Create metadata record(s) via HTTP POST request
- Read
 - View or Export metadata record(s) via HTTP GET request (Export API)
- Update
 - Change existing record via HTTP PUT request
- Delete
 - Remove existing record via HTTP DELETE request

Common URL Query Parameters

Note: all Query Parameters are passed as string values

- username and password
- recordGroup
 - CoMET Record Group into which records will be imported or queried
- description
 - Internal CoMET Record Name
- transform
 - o Importing: typically 'convert-iso19115-2-to-comet'
 - Exporting: typically 'convert-comet-to-iso19115-2'
- format
 - XML, text, or JSON
- uuid
 - CoMET generates if not provided
 - UUID string required to Read (Export), Update, and Delete records
- editState
 - Designate 'editState' = 'APPROVED' as a parameter for automatic publication
- since
 - o date value (2016-03-01T09:10:00)
- max
 - o maximum results returned

Log In

Users must first establish a user session in order to create, read/view, update, or delete metadata. Sessions are established by sending login credentials via an HTTP request to the login URL.

Note: A cookie will be created and used while interacting with the COMET API as long as the session stays alive

API Endpoint: https://data.noaa.gov/cedit/login/wsLogin

API Request: POST

Required Query Parameters:

- username:
 - o Email address without '@noaa.gov'
- password:
 - o Email password

'Log In' example:

```
#!/usr/bin/env bash
export
COMET_LOGIN_URL="https://data.noaa.gov/cedit/login/wsLogin"
DEFAULT_USERNAME="firstname.lastname"
echo -n "Enter username [$DEFAULT_USERNAME]:"
read USERNAME
if [ "$USERNAME" == "" ]; then
  USERNAME=$DEFAULT_USERNAME;
fi
echo -n "Enter password for $USERNAME: "
read -s PASSWORD
echo ""
CREDENTIALS="username=$USERNAME&password=$PASSWORD"
curl --data "$CREDENTIALS" \
  -X "POST" \
  -k \
  "$COMET_LOGIN_URL" \
  --cookie-jar cookies.txt \
```

Create

API Endpoint: https://data.noaa.gov/cedit/metadata/import

API Request: POST

Required Query Parameters: recordGroup, transform

'Create' example:

```
#!/bin/bash
export COMET_URL="https://data.noaa.gov/cedit"
RECORD_GROUP="CoMET"
IMPORT_FILE="$1"
IMPORT_TITLE=$2
TRANSFORM="convert-iso19115-2-to-comet"
UUID="$3"
EDIT_STATE="APPROVED"
curl --cookie cookies.txt \
  -X "POST" \
  -H "Content-Type: application/xml" \
  -k \
  --data-binary @"$IMPORT_FILE" \
"$COMET_URL/metadata/import?recordGroup=$RECORD_GROUP&descripti
on=$IMPORT_TITLE&transform=$TRANSFORM&format=&uuid=$UUID&editSt
ate=APPROVED"
echo
"$COMET_URL/metadata/import?recordGroup=$RECORD_GROUP&descripti
on=$IMPORT_TITLE&transform=$TRANSFORM&editState=$EDIT_STATE"
```

Read/Export

API Endpoint: https://data.noaa.gov/cedit/metadata/\$uuid

API Request: GET

Required URL Path parameter:

- \$uuid
 - o Example uuid: 94306b70-1441-458f-83bf-9a338dda4dab
 - Example full URL path: https://data.noaa.gov/cedit/metadata/94306b70-1441-458f-83bf-9a338dda4dab

'Export' example:

```
#!/bin/bash

export COMET_URL="https://data.noaa.gov/cedit"

if [ $# -ne 2 ]; then
    echo "Exporting with UUID as Filename."
    FILENAME=$1
    echo -e "\n"

else
    echo "Exporting with $2 as Filename."
    FILENAME=$2

fi

curl --cookie cookies.txt \
    -X "GET" \
    -k\

"$COMET_URL/metadata/$1?transform=convert-comet-to-iso19115-2"
> ${FILENAME}.xml
```

Update

API Endpoint: https://data.noaa.gov/cedit/metadata/\$uuid

API Request: PUT

Required URL Path parameter:

- \$uuid
 - o Example uuid: 94306b70-1441-458f-83bf-9a338dda4dab
 - Example full URL path: https://data.noaa.gov/cedit/metadata/94306b70-1441-458f-83bf-9a338dda4dab

'Update' example:

```
#!/bin/bash
# update
export COMET_URL="https://data.noaa.gov/cedit"
if [ $# -ne 3 ]; then
  echo "usage: $0 ISO_XML TITLE UUID"
  exit 2
fi
XML_FILE="$1"
DESCRIPTION="$2"
UUID="$3"
TRANSFORM="convert-iso19115-2-to-comet"
curl --cookie cookies.txt \
  -X "PUT" \
  -H "Content-Type: application/xml" \
  -k \
  --data-binary @"$XML_FILE" \
"$COMET_URL/metadata/$UUID?description=$DESCRIPTION&transform=$
TRANSFORM&editState=DRAFT"
```

Delete

API Endpoint: https://data.noaa.gov/cedit/metadata/\$uuid

API Request: DELETE

Required URL Path parameter:

- \$uuid
 - o Example uuid: 94306b70-1441-458f-83bf-9a338dda4dab
 - Example full URL path: https://data.noaa.gov/cedit/metadata/94306b70-1441-458f-83bf-9a338dda4dab

'Delete' example:

```
#!/bin/bash

export COMET_URL="https://data.noaa.gov/cedit"

if [ $# -lt 1 ]; then
    echo "usage: $0 UUID [UUID ...]"
    exit 2

fi

for uuid in $@; do
    curl --cookie cookies.txt \
    -X "DELETE" -k \
        "$COMET_URL/metadata/$uuid?format=text"

done
```

Search

API Endpoint: https://data.noaa.gov/cedit/metadata/search

API Request: GET

Required Query Parameter: recordGroup

'Search' example:

```
#!/bin/bash
export COMET_URL="https://data.noaa.gov/cedit"

TIME_SINCE="2016-03-01T09:10:00"
EDIT_STATE="COMPLETED"
MAX_RECORDS="1000"
OUTPUT="xm1"

output=$(curl --cookie cookies.txt \
    -X "GET" \
    -k \
"$COMET_URL/metadata/search?recordGroup=CoMET&max=$MAX_RECORDS&format=text")

echo $output
```

Example Search Results

Operational URL:

https://data.noaa.gov/cedit/metadata/search?recordGroup=NOAA/NESDIS/NGDC/MGG/passive_acousticc/&format=json

Results:

More Code Examples

- For more API code examples, visit https://git.ncei.noaa.gov/emma/comet-demo
 - Available to NCEI employees only

Appendix

Glossary of Terms

- 1. **Collection** group of environmental data or products that share common characteristics, is represented by a single metadata record, and consists of one or more granules
 - a. Also referred to as datasets
- 2. **Data Group -** a superset of collections
- 3. **Data Management Plan** plan to ensure that data are properly documented, made accessible, and preserved for future use
- 4. **Data Stewardship Maturity Matrix (DSMM)** a unified framework for measuring stewardship maturity of environmental datasets
- 5. Data Stewardship Maturity Questionnaire (DSMQ) method to create a DSMM assessment
 - a. DSMQ is a more consistent and scalable approach than manual DSMM assessments
- 6. **Data Stewardship Maturity Report (DSMR) -** ISO standard-based dataset-level quality metadata and data stewardship maturity report generated from DSMM assessment
- 7. **Docucomp** tool to create and edit reusable ISO XML components
- 8. Edit States
 - a. DRAFT default state assigned to record after being imported or created
 - i. Record is available for editing
 - b. IN REVIEW state of record once it has been requested to be published
 - i. Designates record is awaiting approval by Publisher
 - c. APPROVED state of record once Publisher approves publication request and record is sent to a WAF for publication and harvest
 - d. PUBLISH if XML passes validation, CoMET automatically changes record's state from APPROVED to PUBLISH
 - e. INVALID If XML does not pass validation, CoMET automatically changes record's state from APPROVED to INVALID
 - i. User must correct metadata and resubmit
- 9. Form Validation ISO Editor's validation that ensures required content is present
- 10. **ISO Editor** a metadata creation and editing tool within CoMET. Provides form validation to ensure required information is present
- 11. ISO Validation Validates against ISO XML schema
- 12. JSON (Javascript Object Notation) lightweight data-exchange format
- 13. Publish sends metadata record to review queue for a Publisher to approve or reject
 - a. Once published, record is accessible on its associated WAF and OneStop
- 14. Record Group related or associated metadata records managed by a team or project
- 15. **Record Name -** record title for CoMET
 - a. Record Name is not inserted into ISO XML
 - b. Recommended to use record fileIdentifier as Record Name
 - c. CoMET automatically assigns fileIdentifier as Record Name when ISO XML record is imported

- 16. **Relevancy Ranking** process of sorting search results so that files which are most likely to be relevant to query are shown at top
- 17. Universal Unique Identifier (UUID) required unique character string used to identify records
 - a. UUIDs are manually assigned or auto-generated, written into XML within UUID attribute in MI Metadata root element, and required for managing records via CoMET API

18. User Roles

- a. READONLY default role assigned to external users that provides read only access to forms and records
- b. EDIT default role assigned to internal users that allows creation and editing of records
- c. GROUP in addition to abilities assigned to EDIT user role, GROUP users may edit forms and add or remove users from form group
- d. PUBLISH in addition to abilities assigned to EDIT and GROUP user roles, Publishers can
 move records between groups, download XML files, and approve publish requests from
 editors
- e. ADMIN in addition to abilities assigned to EDIT, GROUP, and PUBLISH user roles, Admin includes additional administrative abilities such as creating user accounts, assigning user permissions, editing forms, thesaurus maintenance, etc
- 19. WAF Web Accessible Folder

Change Log

Revision Number	Description of Change	Author	Date
A	Content revised to follow order of actions in CoMET database; descriptions of actions revised to be more concise	L Hager	6/28/2021
В	Updated version number on title page and footer; added Publish user role and actions; included user interface upgrades; updated screenshots; added 'Simple Editor' section; added 'OneStop Readiness' section; deleted 'View Record' button from Compare Versions page; deleted 'Commit' button from DSMQ section; updated API instructions; updated document title	L Hager, C. Luquire	8/13/2021
С	Updated version number, added references to and screenshots of Landing Page, Banner, Footer, and Boilerplate Evaluation. Updated Table of Contents	C. Luquire	1/28/2022